$$J = 7(I_4 + I_3) - 3(I_2 + I_1) + 3I_1 + 4I_0$$

$$= 7(I_4 + I_3) - 3(I_2 + I_1) + 3(I_1 + I_0) + I_0$$

On $\quad I_{n+1} + I_n = \dfrac{1}{2n+1}$

$$I_4 + I_3 = \frac{1}{7}$$

$$I_2 + I_1 = \frac{1}{3}$$

$$I_1 + I_0 = 1$$

Ainsi

$$J = 7 \times \frac{1}{7} - 3 \times \frac{1}{3} + 3 \cdot 1 + \frac{\pi}{4}$$

$$= 1 - 1 + 3 + \frac{\pi}{4}$$

Donc $\quad J = 3 + \dfrac{\pi}{4}$